ANALYST		LAB CODE	

Parameter: Purgeables (GC/MS)
Checklists
09/05

INSTRUMENT _____ DATE _____

METHOD OF ANALYSIS

	EPA 624 Series, 40 CFR, Part 136
	18th Edition of Standard Methods 6210 B

	APPARATUS AND MATERIALS	**Y**	**N**
1.	Is purging device large enough to accept 5 mL of sample? [5.2.1]		
2.	Is trap packed with absorbents at a minimum length of 1cm methyl silicone, 15 cm Tenax, and 8 cm silica gel? [5.2.2]		
3.	Is desorber capable of rapidly heating to 180°C? [5.2.3]		
4.	Is the data system capable of extracted ion current profile (EICP) plots--a plot of m/z vs. time? [5.6.6]		
	SAMPLING, PRESERVATION, AND STORAGE		
5.	Are samples collected in glass containers and sealed so that no air bubbles are entrapped in it? [9.2]		
6.	Were samples dechlorinated by adding sodium thiosulfate to sample container prior to collection? [9.1]		
7.	Are samples kept at 4°C from time of collection until analysis? [9.1]		
8.	If samples to be analyzed for benzene, toluene or ethyl benzene are to be held longer than 7 days, is a separate sample collected and acidified? [9.3]		
9.	Are samples analyzed within 14 days of collection? [9.4]		
	CALIBRATION		
10.	Are stock standard solutions stored sealed in Teflon-sealed screw cap bottles with a minimal headspace, at -10 to -20ºC? [6.5.4]		
11.	Are standards prepared weekly for four gases and 2-chloroethylvinyl ether, and at least monthly for all other standards? [6.5.5]		
12.	Is trap conditioned for 10 min. each day prior to use? [7.1]		
13.	Does calibration involve a minimum of three conc. with one standard at the minimum reporting limit? NOTE: If standards are sealed in zero headspace vials, they may be held for 24 hrs., otherwise only 1 hr.[7.3.1]		
14.	Is 10 μL of a spiking solution containing 15 μg/mL of each internal standard added directly to the syringe along with each calibration standard? [7.3.3]		
15.	Is the calibration curve verified each working day by analyzing a QC check sample? [7.4]		

		Y	N
16.	Does the response (Q) meet the acceptance criteria in Table 5? [7.4.3]		
	a.) Is test repeated for those parameters that fail to meet the criteria? [7.4.4]		
	b.) If second test failed, was a new calibration curve prepared for that parameter? [7.4.4]		
	QA/QC		
17.	Have the following operations been performed by each analyst to demonstrate accuracy and precision? [8.2]		
	a.) Were four 5-mL aliquots of a quality control (QC) check sample containing each parameter of interest at a concentration of 20 μg/L in reagent water prepared and analyzed? These samples must have been prepared from a source separate from the calibration standards used. [8.2.1]		
	b.) Did the standard deviation (s) and average recovery (X) in μg/L meet acceptance criteria listed in Table 5? [8.2.5]		
	c.) If there was a failure, were the four aliquots prepared again and analyzed for the failed parameter? [8.2.6.2]		
	d.) If any parameter failed more than once, were all parameters reanalyzed? [8.2.6.2]		
18.	Before analysis of samples, is a reagent water blank analyzed to demonstrate that system is under control? [8.1.3]		
19.	Are 5% of samples from each sampling site spiked? If only 1-20 samples are analyzed per month, only one spike is required. [8.3]		
20.	What is the concentration of the sample spike? (1 to 5 times background is recommended.) [8.3.1.1]		
21.	Do spike recoveries meet the acceptance criteria? [8.3.3]		
22.	For each failed spike, was a QC check standard analyzed and acceptable recovery (listed in Table 5) achieved? [8.4]		
23.	Is each sample, standard, and blank spiked with surrogate standard spiking solution (minimum of three surrogate compounds) and internal standards? [8.6, 11.4]		
24.	Are the BFB criteria in Table 2 met before any sample analysis is performed? [10.3]		
	ANALYSIS		
25.	Is purge gas flow rate adjusted to 40 mL/min.? [11.3]		
26.	Is 5.0 mL of sample analyzed? [11.4]		
27.	Is sample purged for 11.0 ±0.1 min.? [11.6]		
28.	Is trap desorbed at 180°C for 4 min.? [11.7]		
29.	Is trap baked at 180°C for 7 min. between samples? [11.9]		
30.	Does the retention time of the sample target compound agree within ± 30 seconds of that measured for the standards? [12.1.2]		
31.	Does the relative peak height of the three characteristic masses agree within ± 20% of the relative intensities of these masses in a reference mass spectrum? [12.1.3]		

PROBLEMS: